

1. A machine-implemented method comprising:
analyzing one or more instructions of a program; and
modifying the program to expand a register set for a routine in the program.

2. The method of claim 1, comprising:
identifying one or more register moves for the expanded register set; and
modifying the program to perform the identified one or more register moves.

3. The method of claim 2, wherein the identifying comprises:
defining one or more move chains for the expanded register set, and
identifying a sequence of one or more register moves based on the defined one or more move chains.

4. The method of claim 1, wherein the modifying the program comprises modifying the program to expand a register set for a callee routine of the program.

5. The method of claim 4, comprising:
modifying the program to expand a register set for a caller routine that is to call the callee routine.

6. The method of claim 5, wherein the modifying the program to expand a register set for the callee routine comprises modifying the program to expand a register set that includes one or more registers of the register set for the caller routine.

7. The method of claim 5, comprising:

identifying one or more register moves for the register set of the caller routine; and

modifying the program to perform the identified one or more register moves prior to or upon returning from the callee routine to the caller routine.

8. The method of claim 5, comprising:

identifying a register move from a register added to the register set for the caller routine to a register added to the register set for the callee routine; and

modifying the program to perform the identified register move.

9. The method of claim 1, comprising:

modifying the program to store and/or use data in one or more registers added to the register set to help analyze execution of the program.

10. A machine-readable medium having instructions that, if executed by a machine, cause the machine to perform a method comprising:
 - analyzing one or more instructions of a program; and
 - modifying the program to expand a register set for a routine in the program.
11. The machine-readable medium of claim 10, wherein the method comprises:
 - identifying one or more register moves for the expanded register set; and
 - modifying the program to perform the identified one or more register moves.
12. The machine-readable medium of claim 11, wherein the identifying comprises:
 - defining one or more move chains for the expanded register set, and
 - identifying a sequence of one or more register moves based on the defined one or more move chains.
13. The machine-readable medium of claim 10, wherein the modifying the program comprises:
 - modifying the program to expand a register set for a callee routine of the program.
14. The machine-readable medium of claim 13, wherein the method comprises:
 - modifying the program to expand a register set for a caller routine that is to call the callee routine.

15. The machine-readable medium of claim 14, wherein the modifying the program to expand a register set for the callee routine comprises modifying the program to expand a register set that includes one or more registers of the register set for the caller routine.

16. The machine-readable medium of claim 14, wherein the method comprises:
identifying one or more register moves for the register set of the caller routine; and
modifying the program to perform the identified one or more register moves prior to or upon returning from the callee routine to the caller routine.

17. The machine-readable medium of claim 14, wherein the method comprises:
identifying a register move from a register added to the register set for the caller routine to a register added to the register set for the callee routine; and
modifying the program to perform the identified register move.

18. The machine-readable medium of claim 10, wherein the method comprises:
modifying the program to store and/or use data in one or more registers added to the register set to help analyze execution of the program.

19. A system comprising:

- a processor to execute instructions; and
- a medium having instructions to analyze one or more instructions of a program and to modify the program to expand a register set for a routine in the program.

20. The system of claim 19, the medium having instructions to identify one or more register moves for the expanded register set and to modify the program to perform the identified one or more register moves.

21. The system of claim 20, the medium having instructions to define one or more move chains for the expanded register set and to identify a sequence of one or more register moves based on the defined one or more move chains.

22. The system of claim 19, the medium having instructions to modify the program to expand a register set for a callee routine of the program.

23. The system of claim 22, the medium having instructions to modify the program to expand a register set for a caller routine that is to call the callee routine.

24. The system of claim 23, the medium having instructions to modify the program to expand a register set that includes one or more registers of the register set for the caller routine.

25. The system of claim 23, the medium having instructions to identify one or more register moves for the register set of the caller routine and to modify the program to perform the identified one or more register moves prior to or upon returning from the callee routine to the caller routine.

26. The system of claim 23, the medium having instructions to identify a register move from a register added to the register set for the caller routine to a register added to the register set for the callee routine and to modify the program to perform the identified register move.

27. The system of claim 19, the medium having instructions to modify the program to store and/or use data in one or more registers added to the register set to help analyze execution of the program.